

Regional HIV/AIDS Epidemiologic Profile of Worcester, Massachusetts: 2014

Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Diseases, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2014, this resulted in the removal of 4,135 HIV/AIDS cases, of which 973 have died and 3,162 were living. These persons living with HIV/AIDS may still continue to reside and receive care in the Commonwealth. The total number of persons living with HIV/AIDS, irrespective of location at diagnosis, is the basis for MDPH service planning. This change is partially a result of increased activities required by the Centers for Disease Control and Prevention (CDC) for de-duplication among states in an effort to identify cases that are counted multiple times in the National HIV/AIDS Surveillance System. The cases are assigned to the state that reports the earliest date of AIDS diagnosis if available. If the case has not progressed to AIDS, the case is assigned to the state with the earliest HIV diagnosis date. Please note that previous HIV/AIDS fact sheets, data reports and presentations included cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the MDPH HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual reported risk category for men; those cases have been reassigned to the no identified risk (NIR) category. The presumed heterosexual reported risk category was used with the intention of identifying HIV reported risk for women when sex with men is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. Twenty-nine percent of men living with HIV/AIDS and 40% of recent female HIV diagnoses are reported in the presumed heterosexual reported risk category. The application of the presumed heterosexual reported risk category to men is overly inclusive in that female to male HIV transmission is biologically less probable, and there are alternate reported risks that are possible for men, including sex with other men (MSM) or IDU. The CDC reports men diagnosed with HIV/AIDS who report sex with women as their only risk factor, without corresponding partner risk or HIV status information, in the NIR category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for men in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual reported risk categories for women.

Table 1. Total number of people reported with HIV infection or AIDS¹ by mortality status on December 31, 2013: Worcester, Massachusetts²

	N	%
People Living with HIV/AIDS	944	59%
People Reported with HIV or AIDS who are Deceased	664	41%
Total Number of People Reported with HIV Infection or AIDS	1,608	100%

¹ Does not include individuals diagnosed with HIV infection (non-AIDS) who died prior to January 1, 1999 or who were not in care on January 1, 1999

² Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/14

Table 2. Average annual rate of HIV infection diagnosis from 2010 to 2012 and HIV/AIDS prevalence rate on 12/31/13¹: Worcester, Massachusetts²

Average annual HIV diagnosis rate from 2010–2012	Average rate per 100,000	Average annual number of HIV diagnoses
Worcester, MA	16.8	30.3
Massachusetts Total	10.5	688.3

HIV/AIDS prevalence rate on 12/31/13	Rate per 100,000	Number of people living with HIV/AIDS
Worcester, MA	521.4	944
Massachusetts Total	292.7	19,165

¹ The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation.

² Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/14

Table 3. People living with HIV/AIDS¹, deaths among people reported with HIV/AIDS, and newly diagnosed HIV infections by year²: 2003–2012, Worcester, Massachusetts³

Year	HIV/AIDS Prevalence	Deaths among those with HIV/AIDS	Diagnosis of HIV Infection
2003	765	26	49
2004	787	28	50
2005	790	29	32
2006	825	20	55
2007	843	24	42
2008	857	17	31
2009	869	14	26
2010	894	13	38
2011	913	7	26
2012	926	14	27

¹ Number of people living with HIV/AIDS on 12/31 of each year

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

³ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

⁴ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size for the assurance of confidentiality. Additional values may be suppressed to prevent back calculation.

Data source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/14

Table 4. People diagnosed with HIV infection from 2010–2012¹ and people living with HIV/AIDS on December 31, 2013 by gender, place of birth, race/ethnicity, exposure mode, age at HIV infection diagnosis and current age: Worcester, Massachusetts²

HIV Infection Diagnoses			PLWH/A	
Gender:	N	%	N	%
Male	58	64%	543	58%
Female	33	36%	401	42%
Place of Birth:	N	%	N	%
US	37	41%	497	53%
Puerto Rico/US Dependency ³	17	19%	201	21%
Non-US	37	41%	246	26%
Race/Ethnicity:	N	%	N	%
White (non-Hispanic)	-- ⁷	-- ⁷	288	31%
Black (non-Hispanic)	39	43%	298	32%
Hispanic/Latino	31	34%	336	36%
Asian/Pacific Islander	-- ⁷	-- ⁷	18	2%
Exposure Mode:	N	%	N	%
Male-to-male sex (MSM)	25	27%	184	19%
Injection Drug Use (IDU)	10	11%	275	29%
MSM/IDU	-- ⁷	-- ⁷	35	4%
Heterosexual Sex	13	14%	194	21%
Other	-- ⁷	-- ⁷	20	2%
Total Undetermined	40	44%	121	13%
• Presumed Heterosexual Sex ⁴	19	21%	115	12%
• Undetermined ⁵	21	23%	184	19%
Age:	N	%	N	%
	At Diagnosis		On December 31, 2013	
Under 13	-- ⁷	-- ⁷	-- ⁷	-- ⁷
13 to 19	-- ⁷	-- ⁷	-- ⁷	-- ⁷
20 to 24	10	11%	10	1%
25 to 29	7	8%	40	4%
30 to 34	9	10%	37	4%
35 to 39	16	18%	56	6%
40 to 44	14	15%	115	12%
45 to 49	11	12%	161	17%
50 to 54	13	14%	206	22%
55 to 59	5	5%	159	17%
60+	5	5%	157	17%
Total⁶	91	100%	944	100%

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

² Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Ninety-eight percent of people diagnosed with HIV infection from 2010–2012 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

⁴ Includes female sex with male of unknown HIV status or risk. This category is limited to females.

⁵ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

⁶ Total includes American Indian/Alaska Native, other and unspecified race/ethnicity.

⁷ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/14

Table 5. People living with HIV/AIDS on December 31, 2013 by gender and race/ethnicity: Worcester, Massachusetts¹

Race/Ethnicity:	Male		Female	
	N	%	N	%
White (non-Hispanic)	204	38%	84	21%
Black (non-Hispanic)	144	27%	154	38%
Hispanic/Latino	177	33%	159	40%
Total²	543	100%	401	100%

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Total includes Asian/Pacific Islander, American Indian/Alaska Native, other and unspecified race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/14

Table 6. People living with HIV/AIDS on December 31, 2013 by gender and exposure mode: Worcester, Massachusetts¹

Exposure Mode:	Male		Female	
	N	%	N	%
Male-to-male sex (MSM)	184	34%	N/A	N/A
Injection drug use (IDU)	165	30%	110	27%
MSM/IDU	35	6%	N/A	N/A
Heterosexual sex	49	9%	145	36%
Other	9	2%	11	3%
Total Undetermined	101	19%	135	34%
• Presumed heterosexual sex ²	N/A	N/A	121	30%
• Undetermined ³	101	19%	14	3%
Total	543	100%	401	100%

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Includes female sex with male of unknown HIV status or risk. This category is limited to females.

³ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

N/A=Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/14

Table 7. People diagnosed with HIV infection by gender and year of diagnosis: Worcester, Massachusetts¹, 2003–2012²

	Male		Female		Total
	N	%	N	%	
2003	17	35%	32	65%	49
2004	24	48%	26	52%	50
2005	22	69%	10	31%	32
2006	29	53%	26	47%	55
2007	26	62%	16	38%	42
2008	14	45%	17	55%	31
2009	18	69%	8	31%	26
2010	23	61%	15	39%	38
2011	17	65%	9	35%	26
2012	18	67%	9	33%	27

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

³ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/14

Table 8. People diagnosed with HIV infection by race/ethnicity and year of diagnosis: Worcester, Massachusetts¹, 2003–2012²

	White Non-Hispanic		Black Non-Hispanic		Hispanic/Latino		Total ³
	N	%	N	%	N	%	N
2003	13	27%	21	43%	13	27%	49
2004	17	34%	17	34%	15	30%	50
2005	8	25%	13	41%	10	31%	32
2006	9	16%	27	49%	16	29%	55
2007	14	33%	18	43%	9	21%	42
2008	6	19%	11	35%	12	39%	31
2009	7	27%	12	46%	5	19%	26
2010	6	16%	21	55%	10	26%	38
2011	6	23%	8	31%	10	38%	26
2012	5	19%	10	37%	11	41%	27

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

³ Totals include Asian/Pacific Islander, American Indian/Alaskan Native individuals, and those of other or undetermined race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/14

Table 9. People diagnosed with HIV infection by place of birth and year of diagnosis: Worcester, Massachusetts¹, 2003–2012²

	US		Puerto Rico/ US Dependency ³		Non-US		Total
	N	%	N	%	N	%	N
2003	19	39%	8	16%	22	45%	49
2004	22	44%	9	18%	19	38%	50
2005	14	44%	8	25%	10	31%	32
2006	21	38%	9	16%	25	45%	55
2007	-- ⁴	-- ⁴	-- ⁴	-- ⁴	20	48%	42
2008	11	35%	10	32%	10	32%	31
2009	-- ⁴	-- ⁴	-- ⁴	-- ⁴	9	35%	26
2010	11	29%	6	16%	21	55%	38
2011	-- ⁴	-- ⁴	-- ⁴	-- ⁴	9	35%	26
2012	13	48%	7	26%	7	26%	27

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

³ Ninety-eight percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 1% were born in an unknown dependency.

⁴ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/14

Table 10. People diagnosed with HIV infection by exposure mode and year of diagnosis: Worcester, Massachusetts¹, 2003–2012²

	MSM		IDU		MSM/ IDU		HTSX		Other		Pres. HTSX ³		Undeter- mined ⁴		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2003	7	14%	8	16%	-- ⁵	-- ⁵	11	22%	-- ⁵	-- ⁵	14	29%	7	14%	49
2004	8	16%	10	20%	-- ⁵	-- ⁵	17	34%	-- ⁵	-- ⁵	10	20%	-- ⁵	-- ⁵	50
2005	7	22%	11	34%	0	0%	-- ⁵	-- ⁵	-- ⁵	-- ⁵	5	16%	6	19%	32
2006	12	22%	7	13%	-- ⁵	-- ⁵	9	16%	-- ⁵	-- ⁵	16	29%	10	18%	55
2007	15	36%	5	12%	0	0%	5	12%	0	0%	9	21%	8	19%	42
2008	-- ⁵	-- ⁵	8	26%	0	0%	7	23%	-- ⁵	-- ⁵	7	23%	6	19%	31
2009	6	23%	-- ⁵	-- ⁵	-- ⁵	-- ⁵	5	19%	-- ⁵	-- ⁵	-- ⁵	-- ⁵	8	31%	26
2010	9	24%	-- ⁵	-- ⁵	-- ⁵	-- ⁵	8	21%	0	0%	8	21%	8	21%	38
2011	6	23%	-- ⁵	-- ⁵	-- ⁵	-- ⁵	5	19%	0	0%	-- ⁵	-- ⁵	8	31%	26
2012	10	37%	-- ⁵	-- ⁵	-- ⁵	-- ⁵	0	0%	0	0%	7	26%	5	19%	27

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

³ Includes female sex with male of unknown HIV status or risk. This category is limited to females.

⁴ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

⁵ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/14

Table 11. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by year of diagnosis: Worcester, Massachusetts¹, 2003–2012²

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Year:	N	N	%
2003	17	49	35%
2004	21	50	42%
2005	9	32	28%
2006	17	55	31%
2007	19	42	45%
2008	15	31	48%
2009	10	26	38%
2010	11	38	29%
2011	11	26	42%
2012	9	27	33%

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

³ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/14

Table 12. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by gender, race/ethnicity, and place of birth: Worcester, Massachusetts,¹ 2010–2012²

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Gender:	N	N	%
Male	19	58	33%
Female	12	33	36%
Race/Ethnicity:	N	N	%
White (non-Hispanic)	-- ⁵	-- ⁵	-- ⁵
Black (non-Hispanic)	18	39	46%
Hispanic/Latino	10	31	32%
Asian/Pacific Islander	-- ⁵	-- ⁵	-- ⁵
Other/Undetermined ³	-- ⁵	-- ⁵	-- ⁵
Place of Birth:	N	N	%
US	-- ⁵	-- ⁵	-- ⁵
Puerto Rico/US Dependencies ⁴	-- ⁵	-- ⁵	-- ⁵
Non-US	16	37	43%
Total	31	91	34%

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

³ Includes American Indian/Alaska Native, other and unspecified race/ethnicity.

⁴ Ninety-eight percent of people diagnosed with HIV infection from 2010–2012 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

⁵ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/14